REMARKS

Claims 25-31 are pending.

In the aforesaid Office Action, claims 25-27 and 29 and 30 were rejected under 35 U.S.C. 103(a) as being unpatentable over Harris (5,725,814) in view of Johnson (3,611,504), and claim 28 was rejected under 35 U.S.C. 103(a) as being unpatentable over Harris in view of Johnson, and further in view of Tiernan et al. (6,579,484), and claim 31 was rejected under 35 U.S.C. 103(a) as being unpatentable over Harris in view of Johnson, and further in view of Strum (4,824,618).

The Examiner rejected claims 25-27 and 29 and 30 under 35 U.S.C. 103(a) as being unpatentable over Harris in view of Johnson stating, in part, that Harris teaches a method of making a catheter shaft having a first and second layer and a co-tapered section, comprising extruding the first layer from an extruder with a first gear pump (output end?) and co-extruding the second layer with the first layer from a second extruder having a second gear pump, and forming the co-tapered section by decreasing the rotation of the first gear pump and increasing the speed of the second gear pump, and Johnson teaches reversing the rotation of the extruder to decompress the plastic melt and therefore prevent drool of the plastic melt, and Harris further states a problem is a slight leakage from a gear pump when the gear pump is stopped, and therefore it would have been obvious to reverse the gear pumps to decompress the plastic melt which prevents leakage.

However, Harris in view of Johnson does not disclose or suggest reversing the rotation of the first gear pump at the same time as the rotation of the second gear pump is being increased as required by Applicant's claim. Rather, in both Harris and Johnson, the issue of problematic leakage or drool of plastic melt from the die relates to the extruder or gear pump being stopped (0 RPM). However, in Harris, the gear pump is only at 0 RPMs at the end of a co-tapered section (see Harris Figs. 3 and 5). Similarly, since Johnson is disclosing reversing the extruder at the end of the extrusion (after the end of the extrusion molded item is formed in the extrusion mold) in order to decompress the plastic melt to prevent drool when the mold cavity is opened to retrieve the finished extrusion molded item, the combination of Harris in view of Johnson appears at most to disclose reversing the gear pump at the end of the extrusion. In contrast, Applicant's claim 25 requires that the first gear pump rotation is reversed at the same time as the speed of the second gear pump is being increased in order to form the cotapered section, not merely at the end of the formation thereof. Similarly, Applicant's claim 30 requires that the tapered section formed by reversing the gear pump is between the ends of the shaft. In order to form a tapered section between ends of the shaft, the gear pump must be reversed before the end of the tapered section, such that the method of claim 30 is in contrast to method of Harris modified in view of Johnson to reverse the gear pump at the finish of the cotapered section/extrudate.

As discussed in Applicant's specification at paragraph [0011], as a result of temporarily setting the first gear pump into reverse rotation, plastic pressure is removed from the layer being tapered, and the time required to taper the first layer from the larger to the smaller wall thickness is advantageously reduced, to thereby produce a tailored, shorter transition. This is unlike reversing the rotation of an extruder only after the extrudate has been fully formed in order to prevent drool of plastic melt when the mold cavity is opened as taught by Johnson. Similarly, the teaching of Harris at col. 7 (see col. 7 lines 25-30), referred to by the Examiner, discloses that the speed of the second gear pump is ramped down while the speed of the first gear pump is ramped up, to form the inverse co-taper. Thus, Harris in view of Johnson does not disclose reversing the rotation of the gear pump in order to form the co-tapered section as in Applicant's claim 25, or the tapered section as in claim 30.

Regarding claim 26, the Examiner states in part that Harris teaches a method including after forming the co-tapered section of the shaft, forming a distal section of the shaft adjacent to the co-tapered section by decreasing the speed of the second gear pump from the second speed (i.e, along the co-tapered section) to a third speed (i.e., along the distal section) greater than the first speed (e.g., along a proximal section) and less than the second speed of the second gear pump (Figs. 2 and 3). The Examiner appears to be referring to the cycling of the gear pump speeds which forms adjacent co-tapered sections as shown in Harris. However, Applicant's claim 26 requires that the distal section is a nonco-tapered section. As discussed in Applicant's specification at paragraphs [0011] and [0040], temporarily increasing the speed of the second gear pump during extrusion of the co-tapered section to a speed greater than the speed that will be used to form the next adjacent section of the shaft decreases the time required to form the co-tapered section consistent with a method of the invention providing improved short transitions varying the relative proportions of the first and second layers.

Applicant respectfully requests reconsideration, and issuance of a timely Notice of Allowance.

The commissioner is authorized to charge any deficiencies in fees or credit any overpayments to our Deposit Account No. 06-2425.

Respectfully submitted,

FULWIDER PATTON LLP

By: /Gunther O.Hanke/
Gunther O. Hanke
Registration No. 32,989

298364.1